386

D278

Contents

1. Sita Ram Kohli: The Indus Valley civilization

2. Dr.N.V.Ramanayya: The Reddis and the Rayas

3. Do : Tandivada plates of Prthvi Maharaja

4. I.D.Kunduri: The Kanarese origin of the Vijayanagar Empire.

5. M.Somasekhara Sarma: Prthivipati I, Varaguna and Aparajita

6. V.Srinivasan: The Danes in India

7. V.R.R.Dikshitar: Dharma Vijaya, a new interpretatio

8. George P.Conger: Cosmic Persons and Human Universes in Indian Philosophy

9. S.R.Balasubramania Ayyar: The Tisai Ayirattainurruva and the Municandai Record

10. D.R.Bhandarkar: Indian Cultural Conference - Presidential address.

11. K.R.Pisharoti: Amalaka

12. R.Pratapagiri: The History and Historiography of India

13. Eighth All-India Oriental Conference, Opening speec by the Yuvaraja of Mysore.

14. Do. Presidential address by Dr.S.K.Aiyangar

15. Sri Venkateevaraodharana

16. Tripurantakodharana

17. Prabhakara Sastri: Basava Puranam

18. I.D.Kunduri: The Kanarese origin of the Vijayanagar empire

19. S.K.Govindaswami: A note on a Pala Image of Ganapati at Kumbakonam.

20. Somasekhara Sarma: Prolavaram Grant of Kapaya Nayak

21.

--

THE

INDUS VALLEY CIVILISATION

BEING A SUMMARY OF THREE
EXTENSION LECTURES
DELIVERED AT
PATIALA

BY

SITA RAM KOHLI, M. A., F. R. Hist. S.

UNIVERSITY OF THE PUNJAB MDCCCLXXXII

MARCH, 19[illegible]4

1985

42854

PREFACE.

This booklet is a condensed report of three University extension lectures which I was asked to deliver at the Mohindra College, Patiala, early this year. The lectures themselves were illustrated by a large number of lantern slides, prepared from the well-known work on the Indus Civilization by Sir John Marshall in three large folio volumes. I may mention that in the preparation of my lectures I made full use of all the Official Reports of the Archæological Department as well as all the other material available to me in various books and journals containing references to the subject. Since I have taken pains to refer to all my sources of information in foot notes to the book, I do not consider it necessary to acknowledge my indebtedness here to the various books and articles which I have laid under contribution. After this it need scarcely be mentioned that this booklet lays absolutely no claim to originality. Frankly, it is nothing more than an attempt to make a rapid survey of the wonderful relics which have been dug up at Mohen-Jo-Daro and Harappa and to present an account of the more outstanding features of them in a condensed, clear, and popular form. As we know, these relics have brought to our view a vast mass of evidence showing the existence of one of the oldest civilizations and cultures so far known to archæologists.

I have been induced to publish the story of the Indus Civilization by several friends, who had either heard the lectures or read newspaper reports of them.

In conclusion I have to thank the University authorities, first for honouring me with an invitation to give a short course of Extension Lectures on such an important subject, and subsequently, for consenting to publish the present book at their own expense.

I am also grateful to the Government of His Highness the Maharajah of Patiala for showing me every kindness and courtesy while I was in the State and making my brief stay in the capital pleasant and enjoyable. Of the State Officials, Diwan Bahadur Diwan Pindi Das, Minister of Law and Justice, Rai Bahadur Diwan Dina Nath, Education Minister and Principal B. N. Khosla of the Patiala College deserve my special thanks for presiding at the lectures.

GOVERNMENT COLLEGE,
LUDHIANA,
May, 1934.

SITA RAM KOHLI.

CONTENTS.

Preface. i

LECTURE I. THE CITY OF MOHEN-JO-DARO.

Introductory.—The sites and their geographical position—The story of the discoveries—Nature and character of the material discovered—The Buildings—Style of masonary—Quality, size, and shape of bricks—Arrangement of rooms and ventilation—Structure and style of door and window arches—Stairways—Houses of more than one storey—Plan of a dwelling house—Drainage and sanitation—Bath rooms—Drains—Horizontal and vertical drains—Special features of their construction—Street drains; Uniformity of construction—Soak-pits, wells, etc—Larger buildings—Resemblance with Buddhist Assembly Halls—The Stupa—The Great Bath—Highly developed building skill of the Indus people—Municipal administration. 1

LECTURE II. SOCIAL AND ECONOMIC LIFE OF THE PEOPLE.

Cereals, grains and fruits—Flesh diet—Implements of cultivation and grinding of grains—Domesticated animals—Horse—Medicinal finds—Domestic vessels—Pottery Wheel-made: not rich in design—Other articles of household use—Games and toys—Moveable toys and toy-carts—Use of ekkas and carts for traffic—Model of a chair—Games of the adult—Dress and ornaments—Spinning of cotton—Varieties of cotton etc—Style of dress—Manner of dressing the hair— Ornaments—War weapons—Use of metals—Precious stones—Weights—Artistic skill of the Indus people. 12

LECTURE III. RELIGIOUS BELIEFS OF THE PEOPLE.

Scope of the lecture—Scanty material; absence of cult objects—Female figurines — Mother Goddess—God Shiva — Shiva-Linga—Tree worship—Animal worship—Mythical animals—Unicorn animals—Third variety of animals—Animals regarded as vehicles of gods—Religious scheme of the Indus valley people and its connection with later Hinduism—Disposal of the dead—Complete burials.—Fractional burials—Post-cremation burial—Cremation: the common practice to dispos of the dead. Observations on the general conditions of the life of the Indus Valley people—Communication, trade and commerce—Art and craft—Close resemblance between the Indus, the Sumerian and the Mesopotamian cultures—Age of the Indus Valley culture—Authors of the pre-historic civilization—Theories regarding the race of the Indus Valley people—Anthropological evidence—Statuary evidence—Mixed population—Dravidians and Sumerians identical races?—Ethnological opinion divided on the point—Authors of the Indus civilization—Aryans?—Vedic and the Indus Cultures—Which of the two is older?—Sites of discoveries worth a visit. 21

Lecture I. The City of Mohen-Jo-Daro.

Introductory.—As we all know, something like a sensation was caused, a dozen years back, by certain archaeological explorations in the region which may be comprehensively called the Valley of the Indus. At two spots, one at Harappa in the Montgomery District and the other at Mohen-Jo-Daro in Larkana (Sind), the excavations of certain ancient mounds, upon which the archaeologists had long fixed their eyes, led to the discovery of relics of a very ancient civilization. These discoveries were rightly regarded as epoch-making in the whole field of archaeological research and could not but startle the world. Hitherto the savants of Europe and America had assigned the honour of seniority to the countries of the Tigris, the Euphrates and the Nile valleys such as Assyria, Mesopotamia, Egypt, etc. They were regarded as possessing a civilization anterior to that of any other country in the world. But the new discoveries at once bring up Sind and the south west of the Panjab in line with the oldest countries in respect of their antiquity. The reason why till then our own civilization was regarded as belonging to later date than the countries I have named, was that apart from vague and shadowy traditions which do not by themselves count for much, there were no reliable data upon which we could base our claim. In the absence of credentials, carrying our antiquity earlier than the 4th century B. C. when Greece had already passed the zenith of her fame and glory and when the mighty empires of Egypt and Mesopotamia had flourished and been even forgotten, we could not but take a backward place among the ancient peoples of the world.

The recent discoveries, however, set up a new scale of values and thanks to the labour of the Indian Archaeological Department our knowledge of Indian civilization has been pushed back at a single bound by more than 3000 years. The plans of well laid out cities with a complete system of drainage, etc., and the numerous artistic finds that lay buried, perhaps, for thirty centuries* and more and which the archaeologists have now exposed to view have established the fact beyond doubt that as far back as the 4th millennium before Christ the people of the Panjab and Sind were living in well built houses and were in possession of a mature culture with a high standard

* "The complete absence of Achaemenid remains at Mohen-jo-Daro suggests that it was evacuated at latest before the establishment of Persian rule in that area." The Script of Harappa and Mohen-jo-Daro by G. R. Hunter. 1934. p. 16.

of art and craftsmanship and a developed system of pictographic writing.

Now it is my object, in the course of three extension lectures which our University has honoured me to deliver here, to give a few glimpses—it is impossible to do more on the three days that we meet together—of one of the oldest civilizations of the world.

The Sites and their Geographical Position.—Now of the two sites where these remarkable discoveries have been made. Harappa is situated not far from the old bed of the river Ravi and seems to have been a flourishing town in very ancient times. In the earliest hymns of the Rig Veda we find references to this region of the Ravi. One hymn, in particular, speaks of a battle at the Hariyupa, a name closely analogous to Harappa. The evidence of the prosperity of this region of the Ravi goes down even to the fourth century B. C. The Greek historians tell us that when Alexander passed through this part of the country, he met with a formidable opposition from the people dwelling along the banks of the river. Again the presents which Alexander received by way of tribute after peace had been restored, are a clear indication of the wealth of the people and the advanced state of their material civilization. The gifts comprised more than 1000 four-horsed chariots, 1000 bucklers, a great quantity of tortoise shells, besides some tame lions and tigers of extraordinary size.

The other site, Mohen-Jo-Daro is situated in the plains of Larkana between the river Indus and the Kohistan. This tract of land has always been an exceptionally productive one, since it is watered not only by the main stream of the Indus but also by the long and the winding loop that now functions as the western Nara canal. Numerous other natural waterways that take the drainage of the western mountains, further add to the fertility of the soil of Larkana. Even to-day, the district is known as *Nakhlistan*, or the garden of Sind. Mohen-Jo-Daro, or the "Mounds of the Dead" which hide the remains of the ancient cities are located in a narrow strip of land locally called the Island between the main river bed and the western Nara loop. The country around is plain and level, but the mounds are conspicuous objects even from a distance. The highest point in one of the mounds is as much as 72 feet above the surrounding ground

while the others average from 20 to 30 feet above the plain. The actual area now covered by the mounds is 240 acres, but there is little doubt that originally the mounds must have occupied a much larger extent of land.

The Story of the discoveries.—Harappa has long been known to the archaeologists as the find-place of a certain unique class of seals, engraved for the most part with the effigy of a bull, and bearing inscriptions in an unknown pictographic script. Sir Alexander Cunningham, the father of Indian Archaeology, discovered a few of these seals more than 50 years ago, and described them in his report in 1875. Again, in the Journal of the Royal Asiatic Society for 1912, we come across an account by Dr. Fleet of a few more specimens of the Harappa seals which had been acquired by the British Museum. The secret of their age and character had, however, baffled all investigators until the year 1921, when the fresh materials made available by systematic excavation at Harappa and Mohen-Jo-Daro enabled them to partially solve the riddle. At Harappa excavations were started for the first time in 1920-21 by Rai Bahadur Daya Ram Sahni, the present Director-General of Archaeology. The excavations continued intermittently for several years under the direction of other officers of the department as the funds permitted, till a vast wealth of valuable material was brought to light and was ready for the close examination of a body of experts.

Like Harappa, Mohen-Jo-Daro has also been known to the Archaeological Department for many years past. A large number of coins that were found on the surface of the mounds or in their vicinity belonged to the Kushan Kings of the 2nd century A. D., but no one suspected that the remains which lay buried underneath might date back to a period as early as the fourth millennium before Christ. The excavation of this site was begun by the late Mr. R. D. Banerji in 1921-22, a year later than the Harappa excavations, and it is to Mr. Banerji's zeal and patient energy that we mainly owe the subsequent discoveries that have been made there. As at Harappa, the excavations at Mohen-Jo-Daro went on for about five years with the result that the finds that have been laid bare have revolutionised our ideas regarding the antiquity of the culture of India, as also the origins and affiliations of our own culture in reference to the Egyptian, Sumerian and Assyrian cultures of great antiquity.

Both in the Harappa and Mohen-Jo-Daro mounds the excavations have disclosed several strata of remains on which the towns were built in succession one over the other, a new town on the ruins of the previous one. At Mohen-Jo-Daro the digging has been carried on at places through no less than seven incumbent strata, further digging being rendered impossible owing to the rise in the level of the sub-soil water. Of these seven strata, the three latest are distinguished from their predecessors by important differences in the structure of the buildings, as also by the nature and character of some of the finds. Between the third and the fourth strata there is a break which would indicate that the fourth city had been destroyed and remained in ruins for some considerable time before the third on its site arose. Similarly the fourth, fifth and sixth cities are also distinguishable from the earliest or the seventh city by characteristics which mark it off as belonging to a different historical epoch with its own unique culture and civilization.

Nature and character of the material discovered.—The material which has been discovered at these two sites is very rich indeed, both in regard to quantity and the variety of its nature. It comprises the remains of large buildings, and dwelling houses, weapons of war, household implements food-materials and dress-materials, personal ornaments, spinning and textile instruments, many types of earthen-ware vessels, domestic articles like toys and games, metals and minerals like copper, gold, silver, and precious stones, skeletal remains and clay models of domesticated and wild animals, bronze, clay and stone statuettes, and, most important of all, seals and some other objects with engravings and pictographic alphabet †. This kind of material combined with the abundance in which it has been discovered is sufficient to enable us to form a vivid picture of the standard of civilization attained by the people living in the Indus Valley as also of their daily household life.

Before I proceed to describe the outstanding features of the culture as revealed by these excavations, I should like to mention that a good many of the monuments and relics discovered at these two spots (some

† More than 557 specimens of these seals have been recovered so far. They are in all shapes: round, square, rectangular and cylindrical. The most popular size appears to have been 1·1" X 1·1" For details of the method of their manufacture, embossing and engraving etc., see Chapter XVI, Vol. II, Indus Civilization, by Sir John Marshall, Probsthian, London, 1931.

400 miles apart from each other) are so identical in form and character that they cannot but be accepted as representing the same culture. Houses, drains, bricks, pottery, weapons, house-hold utensils, ornaments, seals—all would seem to be constructed on the same plan and some even cast in the same mould. Many of the finds discovered at the two places are so like one another that it is impossible to distinguish between the two sets. If some of these objects were mixed up, there would be nothing to enable us to say "this belongs to Mohen-Jo-Daro" or "that belongs to Harappa."

The buildings.—After these general observations, it is time for me to describe the more important finds in some detail. And first let me take up the buildings, say something about their material, their designs and their structure. The buildings thus far exhumed at Mohen-Jo-Daro fall into three main classes, *viz.*, (1) Dwelling houses; (2) Larger buildings whose use or purpose has not yet been quite determined; and (3) Public baths which may have either a religious or a secular character.

Style of Masonry.—The dwelling houses, both large and small occupy most of the excavated area in the eastern mounds, but along with them are found, here and there, certain edifices of the second class. The public baths are situated on the Stupa mound whose highest point, as has been said before, rises 72 feet above the plain around. The dwelling houses vary much in size. The smallest have no more than two rooms, while the largest are on a scale that would entitle them to be ranked almost as palaces. One of the houses has a frontage of 85 feet and a depth of 97 feet. Its outer walls are 4 to 5 feet in thickness and have a slight batter on the outside. The average house is quite commodious; it is provided with floored bath rooms and drains.

Quality, size and shape of bricks.—The size of the bricks varies; the smallest is 9·5″ into 4·5″ into 2″; and the largest is as much as 20·25″ into 10·5″ into 3·5″. The average proportion between the length, breadth and thickness of a brick is maintained between 4 : 2 : 1. The shape of bricks is always rectangular with the exception of those that were made for special purposes, such as the wedge-shaped bricks almost invariably employed in the construction of wells. The bricks are well burnt and of excellent quality †. They are perfectly indes-

† A couple of structures representing kilns were discovered at Mohen-Jo-Daro and are described by Rai Bahadur Daya Ram Sahni in his report. See p. 193, Vol. I. Indus Civ.

tructible and can be used over and over again, provided that moderate care is taken in removing them from the old walls. The sun-dried and unburnt bricks were used for filling in the foundations and in the unexposed portions of the walls. The bricks were laid in mud although in several cases traces of gypsum plaster have also been discovered in the walls as well as in the layer of bricks. The walls are fairly thick. In the smaller structures the exterior walls usually had a vertical outer face; in larger buildings a battering one. The battered walls resemble those with a batter in Egypt*. The inner faces of the walls in some cases were covered with clay plaster while in the majority of cases they appear to have been brought to a fine finish by rubbing down the bricks, as was done in mediaeval and modern times in India. In some cases, on the mud plaster-coating traces of a wash of a whitish colour have been discovered.

Arrangement of rooms and ventilation.—The floors of houses were made of brick laid either flat or edgewise, the latter method being employed almost invariably in the case of bathrooms and wherever the flooring was exposed or subjected to excessive wear and tear. The houses were provided with (*tahkhanas*) or underground halls which afforded retreat in the summer months. These resembled the Mesopotamian cellars to which air and light could only be admitted through small apertures. They had no doors and the only access to them was probably by means of wooden ladders**. The windows in the outer walls of houses were very rare, sometimes they took the form of mere slits, but it is possible that there were larger openings higher up the walls. For purposes of ventilation, there is evidence to show that wind-scoops were provided in the houses and these were connected to a small aperture in the nitches in the walls inside the rooms†.

Structure and style of door and window arches.—The windows and doorways were generally spanned by flat wooden lintels though corbelled arches were also used for this purpose. But it is pretty certain that the true arch was not known in the Indus Valley at that time. The use of the true arch in Babylonia and Egypt in that age is well

* Mr. Mackay, in his report, adds that the use of a batter which is so common at Mohen-Jo-Daro is unknown in early Babylonian buildings. For fuller details see Mackay's report given in Chapter XVI, Vol. I, Indus Civ. and also Arch. Surv. Rep. 1927-28.

** In Mesopotamia the underground chambers are known as *sardab*. Similar chambers belonging to the Parthian period exist in the ruins at Taxila. These too have had no doors and were entered by means of a ladder.

† This arrangement of ventilation is still a common feature in Hyderabad Sind. Mr. Mackay in his report observes that ventilators of this type are also seen in better class houses in the Persian Gulf.

known and its absence in Mohen-Jo-Daro appears strange if we accept the view that there was a close connection between these countries and India. Our curiosity is all the more increased on this point when we know that the people of Mohen-Jo-Daro were familiar with the making of wedge-shaped bricks, which they could have easily used for making a true arch. It need scarcely be added that they would readily have appreciated the principle of the true arch, had they at all known that in Mesopotamia both the true arch and the corbelled arch were in fairly common use.

Stairways rather narrow.—It is worthy of note that every house in ancient Mohen-Jo-Daro possessed a stairway, which was built straight and steep and never on a vaulting; perhaps the inhabitants of the place never realised the value of the space beneath a stairway. The stairway was erected against a wall or in a narrow passage between two walls, which did not take a space of more than five feet in width. The treads were extremely narrow as is usually the case in present day Indian houses, they averaged 11 inches in height and ranged from 6 to 8 inches in depth. This device of narrow and rather steep treads was adopted to economise space since most of the stairways were built inside the houses.

Houses of more than one storey.—In the ruins as we see them to-day we have naturally the remains only of the ground-floor chambers. The upper storey rooms, if there were any, have all been destroyed by the ravages of time. It is difficult to say with any degree of certainty that the stairways ascended higher than the roof of the first storey though judging from the thickness of the walls of most houses one has the right to conclude that they were intended to carry more than one storey. Two other facts pointing in the same direction may also be mentioned; one, the existence in several comparatively well-preserved houses of projecting balconies all round the courtyard, and the other, the remains of stairways leading from a public street to apparently the upper part of a house.

In regard to the roofs, it would be enough to say that they seem to have been all flat, supported on stout beams and rafters. "In some well-preserved walls", writes Rai Bahadur Daya Ram Sahni, "beam-holes have been found which average 12 inches wide by about 20 inches high and 12 inches deep". † On these wooden beams the usual method of placing planks and mattings with a protective layer of bricks and mud was adopted.

† Indus Civ., Vol. I, page 191.

Plan of a dwelling house.—The general plan of a dwelling house seems to have been that it opened out into the street through a single door, but there are a few houses where the entrances from the street are more than one. The doorways or passages from the street lead into the courtyards of varying sizes and the chambers or rooms are ranged round these courtyards. The rooms are lighted, as a rule, by windows opening either directly into the courtyard or through other intervening rooms. It is rare that one comes across windows in the outside walls opening into the streets. The courtyards are generally found paved with bricks.

Drainage and Sanitation.—Two special features of the houses are worth noticing. The first is the existence of drains and the other, the provision of bathrooms in almost every house.

Bath rooms.—The bath rooms were fairly commodious and were connected by means of drains with the street system. Particular attention was paid to the flooring of the bathrooms. In several cases, the floors are well preserved and reveal the use of cutbricks to fit closely into each other as well as into the corners and side walls. Sometimes L shaped bricks are used to fill up corners. The surface of the bathroom floors is found, in certain cases, coated with a smooth, dark-red substance, probably made up of lime mixed with fine brick-dust*.

Drains.—The drainage system is another noteworthy feature of the city of Mohen-Jo-Daro. It is very elaborate and the poorest quarters of the city have not been neglected. Every street, lane, or house is provided with one or more water channels with brick or stone covers that could be readily lifted to remove obstructions.

Horizontal and Vertical Drains.—Drains were seldom needed inside private houses, since both kitchens and bathrooms were, as a rule, located next to the street wall, having thus direct communication with the public drainage system. However, whenever it became necessary to provide drains inside a house, they were made both on the ground floor and on the upper floor.

Special features of drain construction.—The horizontal drains are all built of brick specially designed to provide for an efficient runnel. The vertical drains are built of terra-cotta pipes with closely fitted spigot and faucet joinings, which are either let into the wall or protected by special structures of brick-work. The drains of private houses are

*The use of asphalt as water-tight lining to the baths has also been proved by the Archaeological Chemist, Mr. Sana Ullah.

connected with the street system by means of one or two openings in the street-walls. These apertures or water-chutes are made so efficiently that they form an angle varying from 30 to 45 degrees with the base of the wall to make the water flow away rapidly.

Street Drains; uniformity of construction.—The street drains are all of one type and are built with great care. As a rule, ordinary moulded bricks were used and cemented with mud mortar. But in several cases, dressed bricks are also found to have been used in the street drains. The drains are provided with easily liftable brick or stone covers. Where a water channel has to turn a corner, the bend is gradual, so as to allow the water to flow without much obstruction. The bricks used for this purpose are sometimes the wedge-shaped bricks. In some cases the water channels were so considerable in width* that it was impossible to bridge them by ordinary means. The engineering skill of that age, however, got over the difficulty by closing them in with corbelled roofs.

Soakpits, wells, etc.—In connection with the drainage system mention may also be made of soak-pits and sediment-pits which are a common sight both in the Harappa and Mohen-Jo-Daro streets. The soak-pits are unpaved and allow the water to soak away freely in the ground. They are placed in the line of the main street drain at the points where the smaller lanes open into the larger streets. Another interesting feature of the buildings of Mohen-Jo-Daro is the wells in the houses. Most of the buildings had wells of their own, admirably built of wedge-shaped burnt bricks. As a rule, they are circular in plan although in one or two instances oval wells have also come to notice. Private houses sometimes threw open their wells for the use of the public as is still the practice in the Panjab. In such cases a well would be built in a small, separate room in the house on the public street so that it was accessible for use both to the inmates of the house and the people at large.

Larger Buildings.—Besides a large number of dwelling houses a few even more spacious buildings have been unearthed at Mohen-Jo-Daro. They not only cover a large area but are also elaborate in design and structure. Unfortunately they seem to have suffered such a thorough-going destruction in the course of centuries that have elapsed since they were built that it is difficult to say what purpose exactly

---

* The construction and size of the drains suggests that the rainfall at Mohen-Jo-Daro, during the monsoon period was heavy. This is also inferred from the absence of irrigation works in the ruins. cf. Hunter p. 18.

they were intended to serve. For aught the remains can tell us, they might just as well have been used as palaces or temples for public worship. Certain it is that not a vestige of an image or even of an image base has been discovered.

Resemblance with Buddhist Assembly Halls.—Among these extensive buildings, perhaps the most interesting consist of some large pillared halls. There is fragmentary evidence to show that originally, the halls were provided with galleries and balconies. It may be added that the general arrangement of the remains, as they have been exposed to the view, would suggest their close resemblance to the Assembly halls of the Buddhist monks of a later period. The largest pillared hall so far unearthed is no less than 80 feet square.

The Stupa.—Before concluding this rapid survey of the structural remains of Mohen-Jo-Daro, I should like to say a few words about two other monuments of its ancient glory, namely the Buddhist Stupa and the Great Bath. The Stupa is situated on the loftiest mound and almost in the centre of a spacious quadrangle. On all sides of the quadrangle are to be found rows of small chambers or cells for the use of the resident monks of the monastery. These Buddhist monuments belong, of course, to a later period.

The Great Bath.—The Great Bath is the most imposing of all the buildings so far unearthed. Sir John Marshall believes that it was part of a vast hydropathic establishment. Its plan is simple. In the centre there is a large quadrangle with verandahs all round. Except on the southern wing of the quadrangle where one finds a long gallery with a small chamber at each corner, all the other verandahs face rows of galleries and rooms at the back. In the midst of the open quadrangle stands a large swimming tank, some 39 feet long by 23 feet broad and about 8 feet deep, with a flight of steps at either end. A well, situated within an adjoining chamber, supplied water to the tank; while it was emptied by means of a covered drain which opened at the south-western corner. The drain was large enough to support a corbelled roof some 6 feet 6 inches in height. The magnificent proportions of the discharge drain, have raised some doubts as to the actual use or uses to which it might have been put, and it has been conjectured that, in addition to its obvious service in carrying off the waste water from the Great Bath, it might have played an important part in the general draining of the place.

Highly developed building skill of the Indus people.—The Great Bath is remarkable as much for its size as for the strength and the solidity of its construction. From east to west it measures 108 feet, while north to south it is as much as 180 feet in length. The outer walls are 7 to 8 feet in thickness with a strong batter. The inner walls are about half as thick. In the construction of the swimming bath itself, every possible precaution seems to have been taken to make the walls water-tight and prevent any sinking down of the foundations. The very fact that inspite of the ravages to which the structure was exposed during the past 5000 years, its walls, foundations and other parts are found in such good state of preservation to-day, bears ample testimony to the highly developed knowledge and skill of the builders of Harappa and Mohen-Jo-Daro. A study of the houses in these ruins shows clearly that both must have been large, populous and flourishing towns, the inhabitants of which could not only enjoy the sanitary and other conveniences of a well-ordered civic life, but could also indulge in the amenities, comforts and even luxuries of a high degree of civilization and culture. The laying out of roads and streets, the provision of baths, drains, soak-pits, and other similar arrangements would indicate a well-thought-out municipal scheme with a civil organization for carrying it out in an efficient and orderly manner. Sir John Marshall, than whom there is no greater authority on the character of the Indus Valley civilization, is of the opinion that, in all likelihood, the better class of citizens at least were able to provide themselves with the luxury of hot-air baths even if no such conveniences existed for the general public.

Municipal administration.—I have referred to the existence of a few large halls at Mohen-Jo-Daro. There is no doubt that while these halls exhibit some general resemblance to the halls of Buddhist congregations of a later date, they also betray features which point to their possible use as halls of assembly for other than religious purposes. In view of the fairly advanced state of municipal administration which the townships had obviously established, it may not be preposterous to entertain the hope that further research may prove the pillared halls to be the remains of what are known, in modern terminology, as municipal halls or town halls. How far this surmise will or will not be confirmed time alone will show. †

† See also Journal of Indian History Vol. XI. Part I. Professor Aiyangar, the Editor of the Journal, has made interesting observations on this point.

LECTURE II. Social and Economic Life Of The People

It was my endeavour in the last lecture to place before you some of the more obvious results of the explorations that have been carried out at Mohen-Jo-Daro and Harappa during the past ten years or so. As we have seen, at both places the excavations have brought to light indubitable evidence of a high state of civilization having existed in the region of the Indus valley some five thousand years ago. Both the newly unearthed towns were popular and flourishing hives of culture, industry and mechanical skill with all the paraphernalia of an advanced society.

In the present lecture I propose to give you a glimpse into some aspects of the social life of the people. I am sure we are all deeply interested to know something about the every-day life of the people of those remote times. Fortunately, the ruins have yielded suffiicient material to enable us to construct a fairly clear picture of the manner of their living, the food they ate, the household utensils they used; the material of dress they wore, the ornaments that adorned their persons, the games they played, the animals they reared, the language they spoke the script they wrote and the religious beliefs they cherished.

Cereals, Grains and Fruits.—One thing is pretty certain that such great cities with teeming populations could have come into being only in a country which was capable of producing food on a big scale, and where the presence of a great river with its tributaries made transport, irrigation, and trade easy. Though little is yet known about the actual methods of agriculture adopted by the people in the basin of the Indus, the finds of stores of charred wheat and barley unearthed in the ruins of Mohen-Jo-Daro show that both these grains were cultivated. One variety of barley found here has been identified with that discovered in the pre-historic graves of Egypt.* Another food article found in the ruins is palm date, the stones of which have been met with both in Mohen-Jo-Daro and Harappa.

---

* Samples of wheat have been examined by experts and also compared with those found at other ancient sites like Jamdet Nasar (Mesopotamia), and Anau (Turkistan). For a summary report of this examination see Ind. Civ., Vol.II, pp. 586-87.

Flesh diet.—It is believed that in addition to the cereals, the food of the people comprised mutton, pork, fish, eggs, etc. The bones and shells of these articles have been discovered in and around the houses of the living as also among the offerings of the dead. Milk and vegetables must have been other articles of diet but as to these there is no positive evidence available.

Implements of cultivation and grinding of grains. The production of these things implies cultivation, but what implements were used for the purpose we have yet no means to ascertain. It is difficult to say with any degree of certitude that the plough had come into use, although among the flint implements some celts have been discovered in the shape of shoe-lasts which may have served as plough-shares. The common type of big circular grindstone had not yet been brought into use. The grinding was done by means of the saddle quern and muller.*

Domesticated animals.—The domesticated animals were many. Those of which actual skeletal remains have been recovered from these pre-historic ruins are the Indian Humped-bull, the buffalo, the sheep, the elephant, and the camel. Bones of the dog and horse have also been found, but curiously not far below the surface. It is not easy, therefore, to affirm with confidence whether they belong to earliar or later times. We have, however, another though indirect evidence, to show that the dogs were among the domesticated animals of the Indus people. Figures of hounds, very finely carved on terra-cotta and other pieces of clay for use as toys for children, have been discovered in the ruins. It is interesting to note that judging from the carved figures of hounds, it would seem that the animals were of a breed similar to the one that Alexander the Great saw in the Panjab 3000 years later when he was entertained to a display of lion-baiting, a breed of which the Greek historian records: "if the dog once clutches a lion, he retains his hold so tenaciously that, if one should cut off his leg with a knife, he will not let go, however severe may be the pain he suffers, till death supervening compels him.‡

Horse.—Of the horse, Colonel Sewell who examined the skeletal

---

* Mackay, in his report pp. 456-7, Ind Civ. Vol II., supplies interesting details about the size and qualities of some of the specimen of querns and mullers recovered at Mohen-Jo-Daro.

‡ Quoted by Sir John Marshall, Ind. Civ. Vol. 1., p. 228.

remains, remarks that it was probably of the same stock as the modern country-bred of Western India. Of course we have no representations of the horse nor have its bone remains been found much below the surface of the ground. But this is only a negative argument and should not be carried too far. We have not come upon the representation of a camel, though camel bones were discovered at a depth of 15 feet from the surface. As Professor Langdon has remarked, if the horse had already been introduced into Mesopotamia as far back as 3500 B. C. there is every reason to believe that it must have found its way into the Indus valley also.

Abundant remains of humped bulls are met with in every stratum of the Mohen-Jo-Daro site. They would suggest the existance of the white and the grey breed of the present times found in Sind, Northern Gujrat, and Rajputana which are entirely different from the small humped cattle of Central India and the Deccan.

If not the actual skeletons, at least clay models of some other animals in the shape of children's toys have also been found. To this category belong animals like the Indian bison, the rhinoceros, the tiger, the monkey, the bear, and the hare.

Medicinal finds.—The only remains of the deer and the antelope that have so far been discovered happen to be their horns. These were probably used only for medicinal purposes as they had to be obtained from a distance. One other medicinal substance found in Mohen-Jo-Daro, though only in small quantity, is *silajit*. This is a black substance exuding from the rocks in the Himalayas, and is frequently used in the treatment of diseases of the liver, spleen, and also for rheumatic pains.

Domestic vessels.—Of domestic vessels that have been found in Mohen-Jo-Daro, it may safely be said that 99% are earthen ware. They exhibit great variety of shape, form and design and among them we find beakers, bowls, goblets, dishes, basins, pans, saucers, cups, jar stands, store jars, and a multiplicity of other vessels, each adapted to its particular purpose. The goblets with pointed bases, were the customary drinking vessels and a large number of these, some broken to pieces and others more or less damaged, but serviceable, were found round some of the public drinking wells. The fact that they have been discovered here and there in heaps of thousands

suggests that it may have been a practice with the Indus folk, as it still is with the more conservative section of the Hindus to throw away the earthen cup or *Kasora* after they had once drunk from it. As in other old ruins, jars of huge sizes have been dug up. It is presumed they were used for the storage of corn, oil, etc.

Pottery wheel made : not rich in design.—Most of the Indus pottery was turned on the wheel, well baked and plain.* But painted pottery was by no means uncommon. As a rule, the designs are on a red slip, and consist of foliate and geometrical devices, among which the interlocking circle, bangle, and scale are common motifs. Animal motifs are rare, though they are very common in the finds from eastern Baluchistan. Glazed pottery is also found in Mohen-Jo-Daro but only rarely. The merit of this pottery lies more in its character and mass production than in decoration and fineness. Vessels of copper and bronze are rare of silver rarer still, while the faience or porcelain was used only for small ornamental vases intended for cosmetics and the like.

Other articles of household use.—Among other domestic articles made of baked earth, porcelain and shell were spindle-whorls, cake-moulds, dippers, and toys. Bone and ivory were also pressed into the service of the housewife for the making of needles, bodkins, combs and the like, while copper and bronze were used for the manufacture of axes, chisels, saws, knives, leather cutters, sickles, fish-hooks, razors, as well as bowls and dishes for household use.

Games and toys.—In regard to games it appears from the large variety of toys found in Mohen-Jo-Daro that the children and adults of the city were just as fond of games and toys as they are in Sind at the present day. The majority of the toys are made of baked clay and quite naturally comprise such common things as models of men and women, animals, birds, carts and various household articles, as well as rattles, whistles and the like.

Moveable toys and toy carts.—It will be of interest to know that simple mechanical toys were not quite absent. From one point of view, particular interest attaches to clay models which take the form of toy-carts, as they were among the earliest representations of wheeled vehi-

* How this pottery was baked we do not yet know. That the bricks were baked in kilns seems almost certain. But whether the pottery was also baked in kilns or in open, as it is done in Sind to-day, we have no means to ascertain.

cles known to us. These are regarded as approximately contemporary with the earliest representation depicted on a stone slab at Ur (3200 B. C.). It may be added that they resemble the model of a four-wheeled wagon discovered in Anau (Turkistan).* All the models of carts found in Mohen-Jo-Daro are of terra-cotta. They have the general appearance of the farm carts or *gaddas* so commonly met with at the present time in the Panjab and Sind.

Use of ekkas and carts for traffic.—A specimen from Harappa, however, happens to be of copper and looks like the *ekka* of the present day with a canopy for protection from the sun and the rain. These wheeled vehicles were used for inland traffic and communication.

Model of a chair.—Another interesting clay toy represents a chair which suggests the use of wooden chairs by the people of the Indus Valley in that remote period. The back of the seat is supported by a strut and one of the legs of the seat is notched, possibly a rough attempt to represent carving or moulding of the wooden legs. The rough and uncouth make of these toys would suggest that they were probably the handiwork of children. "These chairs" writes Mr. Mackay, "perhaps explain the seated position of some of the pottery figures; and we may reasonably conclude that the children of Mohen-Jo-Daro were as fond of playing with dolls as is the child of to-day."

Games of the adult: Dicing.—As for the games for adults, dicing seems to have been a common pastime at Mohen-Jo-Daro and Harappa. This is suggested by a large number of dice pieces that have been found there. In all cases, they are made of pottery and are usually cubic in shape like the European dice, and not oblong pieces in common use in present day India. There is also a peculiarity in the arrangement of their numbers. 1 being opposite to 2, 3 to 4, and 5 to 6. In the modern dice, 1 is opposite to 6, 2 to 5, and 3 to 4. One rectangular dice measuring 1·6″ × 1·4″ × 1·1″ has, however, been discovered. It may be of interest to note that both horse racing and dicing were also among the amusements of Vedic India as is shown by frequent mention of these games in the literature of that period as well as in the subsequent epic literature.

Dress and ornaments.—In regard to the dress and personal ornaments worn by men and women of the Indus Valley folk, our evidence is at present not sufficiently convincing.

---

* Mackay's note on these toys is interesting and suggestive reading. pp. 554-55. Vol. II. Indus Civ.

Spinning of cotton.—That the spinning of cotton and wool was common is, perhaps, placed beyond doubt, so numerous are the spindles and spindle whorls that have been met with in the ruins of houses. Both these instruments are made of pottery of a very fine kind, shell as well as the more expensive faience, indicating that spinning and weaving were practised by the rich and the poor alike. For warm textiles wool was used but cotton fabrics were the common wear. No textiles of any description are ordinarily preserved at Mohen-Jo-Daro owing to the nature of the soil of that place, but adhering to the lid of a small silver vase discovered in one of the houses, a small piece of woven material was found.* This has been subjected to an exhaustive examination with the result that the thread is now believed to belong to a coarse variety of Indian cotton of the present day. * Cotton was cultivated, and the variety, then grown, is closely related to the one commonly cultivated in upper India, today.

Varieties of cotton exported from India.—The Sanskrit word for cotton is Sindhu which seems to confirm the view that it was grown in Sind since very early times. Curiously enough the Babylonian word for cotton is also Sindhu, while the Greek word for the fibre is *Sindon* since Sind exported the Indian muslin both to Babylonia and Greece. But, for certain reasons, the antiquarians hold the view that the fine cotton exported from India to Babylonia and Greece was a product of some cotton tree and not true cotton. The examination of this cotton scrap, however, finally disposes of this contention.

Style of dress.—The only available evidence for the style of dress is afforded by two statues and a number of small terra-cotta figurines. The statues represent male figures wearing a long shawl cloth, which was drawn over the left shoulder and under the right, so as to leave the right arm free, the most usual style found even to-day alike among the fashionable as among the ruder folk of India. It may be of interest to know that this mode of drapery, known as the *Upavita* mode,† is peculiar to India, and is described in some detail in the Yajur Veda. Statues of Gautama Buddha in stone are always exhibited in the same style. The figurines in terra-cotta and clay material, representing both males and

* For details of this important find see Rai Bahadur Daya Ram Sahni's report pp. 194-5. Vol. I. Indus Civ., as well as that of Mr. James Turner, Director of the Technological Research Laboratory, Bombay, vide pp. 585-86, Vol. II. *Ibid.*

† In this connection see also Aryan Path for the month of Feb. 1934.

females, are completely nude save for their head-dresses and ornaments, "But it would not be safe on that account" observes Sir J. Marshall "to infer that it was customary for men of the poor or any other class to go nude." The same authority adds further: "it is not unlikely, that these nude terra-cotta figures may represent gods and goddesses, in which case the generally prevalent practice continued up to modern times."

Manner of dressing the hair.—In regard to the head, it appears from some of the figures that the men wore their beards and whiskers, the upper lip being sometimes trimmed or shaven as in Sumerian statues, but not in all cases. The hair on the head was taken back, either cut short behind or coiled in a knot and tied up at the back of the head with a fillet.* A few specimens of fillets, with thin bands of beaten gold, have actually been found. In regard to women, the only specimen of a statue so far available shows the hair falling loose from behind. But the fact that the bronze and other figures of females have their hair done up and coiled in various shapes, shows, perhaps, that this was the usual way in which they tied it up. A beautiful bronze statuette measuring 4·25 inches in height of a dancing girl was discovered in a house by Rai Bahadur Daya Ram Sahni. "The figure," writes the Rai Bahadur, "is characterised by negroid facial features, and executed with some primitive vigour. The hair is gathered in a heavy coil over the right shoulder, the left leg is bent forward and the right hand placed on the right hip. The left arm which hangs down, is covered with bangles from the shoulder to the wrist—a fashion that accounts for the large number of such ornaments in all conceivable materials, copper, shell, faience, terra-cotta, etc., which are found both at Harappa and Mohen-Jo-Daro. The right arm is adorned with only two bangles above the elbow and with another round the wrist."†

Ornaments.—Ornaments were worn by all classes alike. Necklaces, fillets, armlets finger-rings and bangles are very common among both men and women. Girdles, ear-rings and anklets seem to have been worn by women alone. They show a large range and great variety. In several houses, buried beneath the pavements, vessels full of various descriptions of ornaments made of gold, silver, ivory, copper and semi-precious stones have been found. The girdles worn by women and composed of strings

* Compare the description of Sumerian statues given by V. G. Childe 'The Most Ancient East', pp. 172-73.

† Pages 209-10. Vol. 1., Indus Civ.

of long tubular beads of carnelian have also been discovered among the specimens found. The boring of hard substance like carnelian testifies to the high skill in drilling possessed by people of this region more than 3000 years ago. It is significant that no glass bangles have been met with in the Indus Valley, nor does glass seem to have been used in the manufacture of any thing else, although it was in use both in Masopotamia and Egypt in the third millennium B. C. Our curiosity is still further increased when we know that in the neighbouring regions of Baluchistan bangles of parti-coloured glass were found in a number of places belonging to the same age of culture as Mohen-Jo-Daro.

War-Weapons.—Of the weapons, whether of war or of chase, which have been, so far, discovered both in Harappa and Mohen-Jo-Daro-all, or almost all are only offensive in character, such as axes, spears, daggers, maces, slings together with a few bows and arrows. But of defensive weapons like shields and helmets, etc., not a trace has, so far, been discovered. It is worth noting that up to this time, there is nothing to show that the sword formed part of the armoury of the people.

These implements are made of copper and bronze, although a few made of stone have also been found. But the flint implements may have been only the survivals of an earlier age.

Use of metals.—Copper and bronze had come into use to a large extent in the Indus Valley for the making of weapons, implements and domestic utensils as also for cheaper kinds of ornaments. Copper was obtainable in the immediate neighbourhood, on the one side in Rajputana, and on the other in Baluchistan. It might also have come from more distant territories such as Afghanistan, Kashmir and even Persia. Gold was obtained from Afghanistan or, more probably, it was imported from Southern India, for we know that at least from early historic times the Southern Peninsula supplied the bulk of India's gold.

Precious stones imported from outside.—The precious and semi-precious stones which are used for ornaments were certainly imported by the people of the Indus Valley from outside. A singularly beautiful necklace which has been discovered from a house is made of soft green jade beads, and another of similar description has green amazon stone beads among its constituents. Now jade is not obtainable in India, it comes either from the Pamirs, the Eastern Turkistan through Kashmir, or from Tibet. Similarly the green amazon is only obtainable from the Nilgiri hills in South India.* Semi-precious stones like the rock-

* In this connection see also J. I. Hist. August, 1933.

crystal, the agate and a number of other valuable stones were probably obtained from Rajputana, the Panjab and Kathiawar.

Of other minerals, bitumen is found largely used and may have come from Isa Khel or from neighbouring Kala Bagh-Mari hills on the banks of the Indus. Green earth probably came from Baluchistan. The importing of all these articles suggests that the Indus people had important trade relations with other countries far and near.

Weights.—Another important class of finds exacavated both at Mohen-Jo-Daro and Harappa consists of a large number of small cubical blocks mostly of hard stone. These are well finished and polished and are believed to be weights. Unfortunately none of them bears any inscription or mark, indicating their value, but the results obtained from weighing the blocks show conclusively that they were used as weights and represent some definite system of weights.* They were obviously used for weighing the more costly objects. The larger stone weights are conical in form and are furnished either with a rim at the head or pierced with a hole. The hole is apparently meant for passing a piece of rope through for easy handling.

It is a significant fact that the scale on which the system of weights was based was identical in both Mohen-Jo-Daro and Harappa.

Artistic skill of the Indus people.—Before concluding this particular aspect of the social life of the people of the Indus Valley, I would like to draw your attention to one important feature of the finds, namely an almost complete absence of any attempt at ornamentation. Ornamentation for its own sake would seen to be a feature of later Indian art whether plastic or pictorial. And of this tendency we have little or no evidence in the Indus finds. The houses and other public buildings are devoid of embellishment, nor do we find any decoration on the weapons or utensils of every day use. The very shape of the utensils, whether of clay or of metal, is practical and lacks in motif in their manufacture. In the portrayal of living animals, however, the artist has shown a certain amount of skill. But higher still is the art of the engraver exhibited on the seals and amulets which gives a true idea of the high technical skill of the Indus people. But I must reserve a discussion of the characteristic seals, amulets and some other important finds for the last lecture of the present series.

* For more detailed information on this point see Mr. A. S. Hemmy's report on the system of weights at Mohen-Jo-Daro, pp. 539 593, Vol. II, Indus Civ.

LECTURE III. Religious Beliefs Of The People.

Scope of the lecture.—In the two previous lectures I have tried to describe as clearly as I could within the limited time at my disposal the nature and character of the material recovered from the ruins at Mohen-Jo-Daro and Harappa during the recent remarkable explorations there. On the basis of that material, we also had the opportunity of having a few glimpses of the daily life of the people living in the valley of the Indus five thousand years ago. To-night I propose to tell you something about the religious beliefs of those people. It will also be my endeavour to make an attempt to offer a solution of the more perplexing but equally interesting problems of the age of what has been comprehensively called the Indus Valley Civilization and of its affinities and relationship to other old civilisations.

Scanty material; absence of cult objects.—To take up first the religious aspect of the Indus Valley Civilization. It may be mentioned at the outset that, amongst the finds, whether at Harappa or Mohen-Jo-Daro, very few relics have been discovered which may be said to throw a clear light on the religious practices of the people living in this region. Even certain building structures which, it is surmised, may have served as temples have yielded nothing by way of religious relics: neither shrines, nor altars, nor statuettes nor any other definite cult objects. The only materials upon which we shall have to draw for our ideas of the religious practices of the Indus people in this remote age, consist of the numerous engraved seals, a few clay sealings, a mass of terra-cotta figurines and some stone images in round.

Female figurines.—Among the figurines discovered both at Mohen-Jo-Daro and Harappa, are a large number of female characters in various postures and attitudes. Similar specimens have been found in considerable numbers in the neighbouring territories of Baluchistan and the Zhob Valley, as well as in the more distant provinces of Mesopotamia, Elam and Egypt. Some of the figurines represent women kneading dough or holding

a plate of cakes in their arms. These were, probably, mere toys. There are others where a woman is carrying a child or as votive represents an expectant mother. Such figures may be regarded as offerings; that is to say, offerings made, and actually presented at places of worship in fulfilment of previous vows. The practice of offering vows to gods or deities has been a common phenomenon in all ages and in all countries.

The cult of Mother-goddess.—But there is a class of figurines, forming the bulk of those unearthed which bear a distinctive feature and are uniform in type. These depict a standing and almost nude female, wearing a band or girdle about her loins with an elaborate head-dress and a collar. The top of the head-dress is often of the shape of a crescent.*

The Indus Valley figurines are of a slightly different type from those of Baluchistan and Western Asia. One special point of difference in these images is, that the Baluchistan type consists only of the head and body on a flat base, the part below the hip not being shown at all. In other respects, however, no appreciable difference is noticeable, and the conclusion would seem to be forced upon us, that the civilization and the religious ideas from the Mediterranian to the Indus may be traced to a common origin. The generally accepted view of arachæologists is that the absence of the lower parts of the body in the Baluchistan and West Asian figurines evidence the underlying ideas of the Earth-goddess which is usually represented as emerging from the earth. The cult of the Earth-goddess is believed to have originated in Anatolia and spread over the great part of Western Asia. So close is the correspondence of the Indus Valley figurines with those of the Western Asian legless images that it would not be without justification to assume that both sets represent the Mother-goddess.

The cult of the Divine Mother has taken deep roots in India from times immemorial and almost every village in the country has her shrine. She is looked upon as 'the author of fertility, dispenser of life and giver of all things.' Faith in the worship of the Mother-goddess is particularly strong among the Non-Aryan tribes in India. some of whom, as Sir John Marshall observes, had never really

* For a detailed description of these objects see chapter XIII, Vol. I., Indus Civ.

come into the fold of Vedic Hinduism. This view seems to find further support in the fact that the goddesses or female deities play only a subordinate part in the Vedic religion, the principal gods of the Rig Veda being exclusively male gods. *Prithvi*, the Earth-goddess, is, no doubt, frequently mentioned in the Rig Veda. She is also personified as a deity, sometimes by herself, at other times in conjunction with the sky, and she is invoked for her blessings. But, as Sir John Marshall has pointed out, the Earth-Goddess of the Vedic Aryans is a figure quite distinct from the Earth-goddess of the Indus people. He adds that it was not until later times when the Aryans and the pre-Aryans amalgamated, that her worship came to resemble that of the older Goddess.*

The prevailing faith in the cult of Mother-goddess is further evidenced by an interesting seal discovered at Harappa. This seal represents on the obverse a nude female figure upside down with a plant issuing from the womb. It is followed by an inscription of six letters which still remain to be deciphered.† At the other end of the seal we find depicted a pair of animals standing on their hind quarters. A similar representation belonging to the 6th century A. D. has been found at Bhita in U. P. The plant in this case looks like a lotus flower.‡ One is therefore inclined to believe unless the inscription on the seal proves the contrary that the cult of the Mother-goddess was prevalent in the Indus Valley as far back as the fourth millinnium B. C.

God Shiva.—Side by side with this form of worship of the Nature Goddess, we also find evidence of a male god. Now, who was this male God? From the material available he appears to be God Shiva. On a seal discovered at Mohen-Jo-Daro this god is

---

* Indus Civ. Vol. I., page 52.

† Attempts to decipher this script have not, so far, met with success. It is, however, a matter of great satisfaction that Professor Langdon and Messers Smith & Gadd have been able to draw up a tentative list of signs which might be found helpful, at a future date, in the decipherment of this script (Vide Indus Civ., Vol. II. Reference may also be made to Dr. G. R. Hunter's recent publication on the subject (p. 10 *ante*) Dr. Hunter has made an intensive study of this material and has arrived at many valuable results of classification.

‡ For details see page 52, Vol. I. Ibid. The lotus plant is represented to be issuing from the neck in the Bhita figure instead of from the womb as in the Harappa figurine.

portrayed as 'seated on a throne, cross-legged with a least one hand presented frontwards in the posture of a *yogi*. The head is three-faced. It is surmounted by a pair of horns projecting out of a tall head-dress and on either side of it. Round about the portrayed figure may be seen the effigies of four animals, an elephant, a tiger, a buffalo, and a rhinoceros. Below the seat, stand two horned deer looking up to the figure. The yogic posture and the representation of the animals are clear indications of association with forest life. The historic Shiva is *maha yogi*. He is also *pasupati* or Lord of the beasts. The three-faces in the portrayed figure are also reminiscent of the *trimurti* or the three-faced Shiva, the three eyes, one set in each face denoting the god's insight into the past, present and future. The two horns and the tall head-dress of this pre-historic figure further help us to connect this unknown god with Shiva. One of the essential attributes of the traditional Shiva is, as we know, his famous three-forked spear or *trisul*. The pair of horns in this case, no doubt, have a special sacred significance and, as Sir John Marshall observes, 'are the emblems of a deity.' The same authority further adds that precisely the same practice obtained at this period in Sumer and Babylonia, where horns were commonly used to denote the deity, but were also worn by kings or priests, presumably because they were regarded as representatives of divinity.*

It seems this particular device of representing divinity in the primitive times did not entirely die out but probably in latter days it took the form of *trisul* or Trident. The Buddhist *tri-rattan* or the Trinity of the Three Jewels, *viz*: the Lord Buddha, the Sanghs and the Dharma, together with the Yogi like posture of Gautama Buddha and the deer below his seat, seem to have been adapted from this time-honoured practice of representing super-human figures, usually gods.

Shiva-linga.—Among the numerous articles unearthed in these excavations, we come across a large number of stone pieces of various shapes and sizes. Some of these pieces have the form and appearance of what we call a Shiva Linga, while others look like ring stones. The ring stones have round top and bottom, some being very carefully smoothed as if they have been turned on the lathe. They are all perforated in the middle. The association of the ring stone with the

---

*On the position of kings and priests in Sumerian society see pp. 125-129., The Sumerians, by C.L. Woolley.

Linga-shaped stone leads to the hypothesis that they represent cult objects and may be identified with the phallic emblems of creation, a scheme of worship so characteristic of Shaivism.* But it seems equally probable that these stone pieces may have served various other purposes. The evidence of iconic form of worship, however, is anything but conclusive.

Tree worship.—The cult of the tree is common to many ancient religions of the world, and it may not be without special interest for us to know that there is evidence of the worship of tree-gods prevailing amongst the Indus Valley people. It is significant of a good deal, in this connection, to come across a wonderful scene depicted on a seal. For here we have a complete representation of the 'presiding deity of the *pipal* tree portrayed between two forked branches of it, as also of a number of accessory figures, both human and of composite animals; in an attitude of reverential approach to the tree. This combination in one picture of the worshippers and the object of worship leads to the representation supreme interest the value of which it is difficult to exaggerate. The *pipal* tree, we know is and has been sacred to the Hindus. It is regarded as the "Tree of creation" and the "Tree of knowledge" (Boddhi tree). A similar conception of a "Tree of knowledge" or "Tree of life" is traceable, observes Sir John Marshall, from early age in Mesopotamia and may well have been equally ancient in India.†

Again, we may see the survival of the tree-worship, pure and simple, in the well-known example of the *Tulsi* plant where the process of anthropomorphizing is carried still further in the *Tulsi* goddess being wedded with elaborate rites to the *saligram* stone.

Animal worship.—In regard to the reverence paid to the animals, or their actual worship, we have evidence in abundance in the Indus Valley relics, such as the seals and the sealings and in a variety of figurines in terra-cotta and stone. The animals represented on these

---

* That the linga or phallus worship was prevalent in very ancient times may also be inferred from a couple of references in the Rig Veda. We come across mention of the *Sisandevas* or votaries of carnalism. Again the worship of Priapus amongst the Greeks and the Romans may be taken to be identical with the *linga* worship.

† Page 64, Vol. I., Indus Civ. In the Panjab, it is a custom with Hindu ladies to walk round the pipal tree on certain sacred days (but not naked as remarked by Crooke and quoted in a foot-note by Sir John Marshall).

seals may be placed in three categories: (*i*) Those purely mythical animals with a composite form, for instance, part goat or ram, part bull and part elephant or part lion with human countenance etc. (*ii*) Ambiguous animals like the unicorn or one-horned animals and (*iii*) The ordinary animals belonging to the natural species.

Mythical animals.—The purely mythical animals portrayed on the seals of Mohen-Jo-Daro bear clear and unmistakeable resemblance to similar objects which formed the motif of early Mesopotamian glyptic art. Amongst these a particularly noticeable creature is the semi-human and semi-bovine figure attacking a horned tiger. It reminds one of 'the Sumerian figure Eckidu, the half man, half bull monster whom the goddess Aurora created to combat Gilgamish, but who afterwards became his ally and with him fought against the wild animals'. In Mesopotamian art Mr. Ward assigns to this particular motif, a date going back to the fourth millenium B.C.* The representation of the mythical animals as well as the use of horns as indicating divinity are very widespread and popular in the ancient world.

Do these represent objects of worship or the seals with such objects engraved on them were used as amulets to scare away the evil spirits? Sir John Marshall seems to suggest that the usage of horns had its origin in primitive animal worship, the horns alone being retained when the animal god assumed a human shape, and afterwards becoming a badge, as it were, of superhuman prowess, which might be transferred to any other deity or hero or demon, whether of animal origin or not.‡

Unicorn animal.—A very popular animal which is portrayed on the seals has a fabulous character. It is a one horned animal and looks more like an antelope.† This so-called unicorn animal is familiar to Indian folk tales and the *Varaha avtar* or the boar-like representation of God Vishnu which is described as *ekasringa* or the one horned

* Mr. Woolley's short account of the early Sumerian art is an interesting reading supplemented by beautiful illustrations. *Vide* The Sumerians ChapterII.

‡ Page 64, Vol. I, Indus Civ. References to the 'horned demons' of the Dasa are also met with in the Rig Veda.

† In some of the Persepolitan sculptures of the 4th century B. C., an ox is represented with one horn.

may conceivably embody some memory of this pre-historic beast. There is another peculiar feature connected with this animal as portrayed on the seals namely; a trough-like object placed in front of his fore-feet. The object looks like an incense-burner and the whole representation may be intended to symbolise the worship of a deity or a victim of sacrifice.

Third variety of animals.—As typical of the third variety of animals, we have the representations of the Indian elephant, the Indian tiger, the Indian rhinoceros, the Indian humped bull, the bison and the water buffalo. As in the case of the unicorn animal, an object resembling a food-trough is invariably found associated with the bison, the rhinoceros, and the tiger. With the representation of the elephant and the buffalo, however, no uniformity exists, that is to say, sometimes the figures of these animals are represented with a food trough in front of them, but at other times the trough is absent. In the case of the bull on the other hand, no trough is found at all. Now, the tiger, the rhinoceros, the bison and the elephant are not likely to have been domesticated. If so, the possibility of a trough-like object being used as a manger or food-trough is ruled out in their case.

Animals regarded as vehicles of gods.—Again, we know from the traditions and relics of later Hinduism that some of these animals were regarded as the vehicles (*vahana*) of various gods and goddesses and have become holy in consequece of such association. The tiger appears as the vehicle of the Mother-goddess who is known as *Vagh Devi*, (tiger-goddess) among the Bhils of Berar. Similarly the elephant appears as *Airavat*, the vehicle of God Indra, in Aryan mythology. He is also worshipped as Ganesh or Ganpati, the son of Shiva and Parvati. The buffalo is the *vahana* or vehicle of Yama, the God of Death. The rhinoceros claims reverence from the Naga tribe, who bury the bones of the animal in the fields to make the crops grow.

Religious scheme of the Indus Valley people and its connection with later Hinduism.—Having regard to the fact that India is a very conservative country, particularly in maters of religion, it is not unlikely that the mythological features of later Hinduism to which we have just been referring may have been mere survivals of the more marked characteristics of the religious faith and practices of the Indus Valley people. Indeed, as we have more than once pointed out, so close is the resemblance between the worship of certain animals, trees and other

natural objects in the period of the Indus Valley civilization and of similar objects in the later day Hinduism that one cannot avoid the conclusion that there was an organic connection between them. Faith in the Mother-goddess along with the god Shiva, the existence of concrete evidence of the worship of animals and trees, as also of certain stone objects like the Linga and Yoni as representing the principle of creation, who can doubt that all these formed an essential part of the religious scheme of the Indus Valley people, 5000 years ago?

The present position of scholars and antiquarians on the vital issue we are discussing, cannot be put more concisely or with greater force and clarity than has been done by the Editor of the Journal of Indian History. In his review of the chapter on Religion in Sir John Marshall's monumental work, he observes: *

"However inadequate the evidence, there is enough to justify the conclusion that, so for as it was possible of being expressed in concrete forms, the religion of the Indus people in several respects was the progenitor of modern Hinduism as a religion, and as distinct from the philosophical side of it. The features common to both are the cults of Shiva and the Mother-Goddess, of the Nagas and the Yakshis, the worship of animals, trees, stones, Phallism, Yoga, Saktism and the doctrines of Samsara (Metempsychosis) and Bhakti (devotion to a personal god). These seem traceable to the Indus religion, although we are not yet in a position definitely to trace these elements to their source, and indicate the time when they were actually incorporated into Hinduism. Current notions of pre-Aryan Indian civilization have to be materially revised. We shall have to redraw the picture of Indian civilisation afresh and revise current notions regarding pre-Aryan religion and pre-Aryan material culture. We have to give up the idea that the modern jungle tribes are the representatives of the pre-Aryan civilization of India. These existed 5000 years ago, as they do now. It would be unreasonable to assume that they represent the culture and civilzation of the pre-Aryan Indians."

Disposal of the dead.—Closely connected with the subject of religion is the question of the disposal of the dead. As a universal and awe-inspiring phenomenon, death has always possessed a significance of its own, and among primitive people, it has unfailingly exercised a

* J.I.H. Vol. XII., P. II. 283

potent influence in stimulating and strengthening the religious sentiment. The method of disposing of the dead and the rites and ceremonies observed in connection with the practice are, therefore, found more or less associated with, if not actually influenced and inspired by the religious beliefs of the people. Unfortunately, the evidence of this kind available at Mohen-Jo-Daro is but meagre and inadequate for drawing definite conclusions as to the stage of religious development reached in the Indus Valley civilization.

Complete burials.—So far as the recent explorations can help us in formulating a reasoned judgment in the question, we may say that there is evidence of three methods having been adopted by the people for disposing of their dead bodies, namely; (1) complete burials (2) fractional burials and (3) post-cremation burials. In the first category may be included twenty-one complete skeletons which have been discovered at Mohen-Jo-Daro. Of these, fourteen were found in one room of a ruined house, another group of six in a lane of the city, and one isolated skeleton in another street. It is important to note, that along with the collection of fourteen skeletons discovered in a room, were found lying a variety of personal ornaments, some of which actually encircled the bones but curiously there was a complete absence of what is known as grave furniture, such as metallic or earthen ware vessels, or offerings of food materials etc., usually provided for the dead. It is possible that the dead in this case were 'the victims of some unwonted tragedy.' At Harappa, however, several examples of complete burials with remnants of grave material, have come to light. A couple of sites in Baluchistan have also yielded a few skeletons of the dead who seem to have been buried in graves with orthodox rites and funerary material.

Fractional burials.—The second mode of the disposal of the dead by the Indus people has been described by Sir John Marshall as fractional burial. (It is believed that the dead bodies were first exposed to beasts and birds for some time and then a few of the remaining bones were collected and buried with appropriate ceremonies.) In a few cases, where funerary deposits have been discovered at Mohen-Jo-Daro, a variety of objects like miniature vases and jars, beads, balls, ood materials and personal ornaments have also been found. At Harappa plenty of examples of fractional burials have been brought to light, but of these very few appear to have been contemporary with the earliest remains of Mohen-Jo-Daro; the others

belong to a later period. A good many examples of fractional burial have also been revealed at Nal in Baluchistan, and in almost all cases miniature vessels and ornaments intended for the use and service of the deparated have been recovered*.

A large number of urns of similar shape and with like contents have also been discovered in the northern and southern districts of Baluchistan by Sir Aurel Stein.

Post-cremation burial.—The third mode of disposing of the dead, described as post-cremation burial is of special interest to us. The dead were cremated and a small quantity of their ashes was enclosed in urns which were then buried in the earth. A similar practice still prevails in the Panjab in the case of those that may have led a life of piety, purity and devotion, or who may have otherwise earned public distinction. Generally, a Smadh (small brick shrine) is erected over the place of burial which from the top looks like an inverted urn. A very large number of wide-mouthed urns used for burial purposes have been discovered at Harappa and a few have also been brought to light at Mohen-Jo-Daro. They contain, besides ashes, charcoal and the bones of fowls and fishes, a number of smaller earthen ware vessels, toys, figurines, beads, bangles etc., comprising funerary material. Mr. Vats has given a detailed description of these finds in his official report on the Harappa excavations. It appears that in some of these vessels have been identified impressions of the seeds of the melon species as well as of chaff and straw, giving indication of the food stuffs buried along with dead.‡

Cremation : the common practice to dispose of the dead.—As it has been said above, instances of complete burials are but few and in no way quite convincing of the fact that the dead were buried. Again, a big group of fractional jar burials, discovered in the ruins of houses at Harappa, belong to the intermediate period and are clearly of an age later than the earliest period of the Indus Valley civilization. In Mohen-Jo-Daro only five such urns have been discovered showing unmistakably that the practice must have been very rare. So far as the present evidence goes, Sir John Marshall considers it very probable that the most common method of disposing of the dead during the flourishing period of the Indus Civilization was by cremation.

* For fuller description of this see Mr. Hargreaves reports *vide* Archeological Survey Reports of India,

‡ It may be of interest to note that the method of burying bone-ashes in cinerary urns and of bone relics in big jars are found described in some of the Vedic texts particularly in the Ashavalayan and Kaushika Sutras.

It is not unlikely that in the common practice of the cremation of the dead, lies the real explanation of the scanty remains relating to the dead of those early times. Fractional and complete burials, a few relics of which only have been met with, may have been associated with the remnants of Iranian or Persian culture of a later period.

Observations on the general conditions of life of the Indus Valley people.—From the religious aspects of the civilization of the Indus Valley people in the fourth millenium B. C. let me now turn to a very rapid survey of the general conditions of the life of the people of those remote times. The primary basis of life was, no doubt, agriculture; wheat, barley and cotton were grown, domestic animals kept; and horses and elephants were also in fairly common use. These were, probabaly, tamed to be employed in industry and commerce. Clay and copper models of wheeled carts and wagons have been discovered in Mohen-Jo-Daro and Harappa, and it would be quite legitimate to conclude that they were pressed into service in daily life with horses and other animals yoked to them.

The cities were beautifully laid out with streets, drains and both public and private baths, thus furnishing evidence of a good civic organization. The building materials comprised kiln-burnt bricks with mud and lime mortar. Stone had, perhaps, gone out of use as a building material and of course, wood was employed for doors, windows and roofs.

Communication, Trade and Commerce.—There is ample evidence of communication with other parts of India and with other countries of Asia for purposes of trade and travel. Copper seems to have been imported from Afghanistan, tin from Khorasan, and precious stones from Turkistan over the Pamirs. Trade and commerce were facilitated by a system of writing and it is believed that the engraved seals which have been discovered in such large numbers were used to authenticate documents. As we have seen, a well recognised system of weights also seems to have been current among the Indus people.

Art and Craft.—In art and craft too the Indus people had made fairly good progress. The crafts of the potter, the weaver, the goldsmith and the jeweller flourished at least in the urban areas. The evidence on this point is particularly satisfactory in respect of the

number of the relics, their variety and their wide distribution. There are good reasons to believe that the artisans of Mohen-Jo-Daro had acquired a good knowledge of working metals both by hammering and by casting. Alloys of copper and tin in various proportions which have been met with indicate a fairly advanced stage of civilization.

The art of engraving as illustrated by the seal designs of bulls, elephants, tigers and other animals had reached a high degree of perfection; all the designs and effigies seem to have been executed with great skill and are thoroughly life like.*

Close resemblance between the Indus, the Sumerian and the Mesopotamian cultures.—Now these general features of the social and economic life of the Indus Valley bear a close resemblance to many of the corresponding characteristics of the Mesopotamian and Sumerian cultures. For instance, the invention of the potter's wheel, the use of metals for the manufacture of vessels, tools and weapons, the use of kiln-burnt bricks for buildings, the general life in properly laid out cities, the development of minor arts and crafts suited to the needs of an urban population, the cultivation of cereals like barley and wheat, the use of picture-signs for writing, etc., are some of the features common to all the three pre-historic civilizations. The mass of evidence at our disposal leaves little or no room for doubt that the Indus Culture was contemporary with the early cultures of Masopotamia and Sumer. If a further proof were needed, it would be found in some of the typical Indian products, particularly a couple of seals that have been recovered from Elam and Mesopotamia, showing that a lively intercourse was carried on between these countries 5000 years ago.‡

Age of the Indus Valley Culture.—Regarding the question of the age of the Indus Valley Civilization, it has been established beyond doubt that the culture, as revealed by the material discovered at the two sites of Harappa and Mohen-Jo-Daro, belongs to the same age as the Afrasian Culture of the river valleys. The Afrasian Culture has been assigned, by competent authorities, to the fourth millenium B. C. Proceeding on that basis and after making a careful examination of the finds from the Indus Valley, the archaeologists have fixed the date of the Indus Civilization about 3000 B. C. allowing a margin

---

* See also Gordon Childe's obervations on this point, in his book, The Most Ancient East.

‡The works of L. A. Weddell, V. G. Childe, C. L. Woolley and Hall ——y be read with interest in this connection. See also J. R. A. S. 1925 and Antiquaries Journal, 1928.